

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number  
**WO 2005/006578 A1**

(51) International Patent Classification<sup>7</sup>:

**H04B 1/18**

(74) Agents: GIANNESI, Pier Giovanni et al.; Pirelli & C. S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

(21) International Application Number:

PCT/EP2003/007187

(22) International Filing Date: 4 July 2003 (04.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicants (for all designated States except US):

PIRELLI & C. S.P.A. [IT/IT]; Via Gaetano Negri, 10, I-20123 Milano (IT). TELECOM ITALIA, S.P.A. [IT/IT]; P.zza Affari, 2, I-20123 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MELE, Renata [IT/IT]; Pirelli Labs S.p.A., Viale Sarca 222, I-20126 Milano (IT). RICCI, Fabrizio [IT/IT]; Pirelli Labs S.p.A., Viale Sarca 222, I-20126 Milano (IT). SERRA, Stefano [IT/IT]; Pirelli Labs S.p.A., I-20126 Milano (IT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

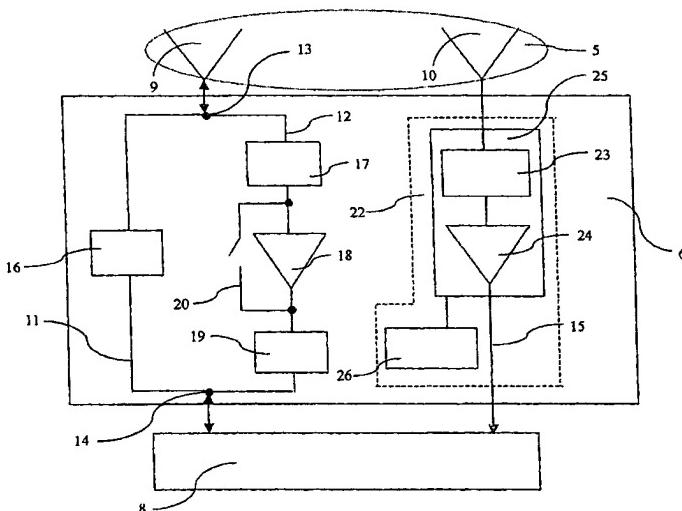
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: HIGHLY RELIABLE RECEIVER FRONT-END



WO 2005/006578 A1

(57) Abstract: A receiver front-end (6) for use in a transceiver station (3) of a wireless communication network (1), said transceiver station (3) being associated to an antenna assembly (5) comprising a primary and at least a secondary antenna (9, 10). The receiver front-end (6) is adapted for insertion between said antenna assembly (5) and signal processing sections (8) of said transceiver station (3). The receiver front-end (6) includes a primary and at least a secondary receiving branch (12, 15), said primary receiving branch (12) being adapted for coupling to said primary antenna (9) and to said signal processing sections (8) of said transceiver station (3) and said secondary receiving branch (15) being adapted for coupling to said secondary antenna (10) and to said signal processing sections (8). According to the present invention, said primary receiving branch (12) comprises nonsuperconducting components, including at least a non superconducting filter (17) while said secondary receiving branch (15) comprises at least a superconducting component.



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*